

Appendix D - Interaction Report for The Highway Fire and The Beal Fuel Break

INTERACTION REPORT

**THE HIGHWAY FIRE
(00FKU008628)**

AND

**THE BEAL FUEL BREAK
(Rx 4-FKU-007)**

AUGUST 13 - 18, 2000



BACKGROUND

The present day Beal Fuel Break is a segment of the historic 650 mile long Ponderosa Way Fuel Break that was constructed by the Civilian Conservation Corps in the 1930's.

Today, the Beal Fuel Break is cooperatively maintained by individual landowners, the U.S.D.A. Forest Service and the California Department of Forestry and Fire Protection.

The Beal Fuel Break ranges in size from 100 to 300 feet in width and is located on both private property and National Forest lands. Within this area, selected vegetation is removed in such a way as to break the horizontal and vertical continuity of wildland fuels. The maintained portion of the Beal encompasses 3,000 acres, with 2,500 acres on National Forest lands and 500 acres on 88 private parcels.

The last organized maintenance activities on the Beal occurred in 1995. This maintenance was enthusiastically accepted by private landowners due to the 1994 Four-Lane Fire, which burned 204 acres down slope of the Beal. On private lands, maintenance consisted of inmate crews hand cutting and piling vegetation, followed by burning of the piles. On the National Forest lands, a combination of inmate crews and mechanical equipment was used to pile the vegetation which was later burned.

PROJECT COSTS

Based on the VMP contracts the 1995 maintenance of the Beal cost the following:

	CDF	LAND OWNERS	USFS	Total
PERSONNEL	18,033	18,052		36,085
EQUIPMENT	43,149*	1,940		45,089
SUPPLIES	230**			230
TOTAL	\$ 61,412	\$ 19,992	\$149,000	\$ 230,404***

* These funds cover use charges for crew carrying vehicles, chainsaws and replacement chains.

** These charges cover consumable supplies, i.e. vehicle fuel, saw fuel, saw oil, burn fuel, hand tools, gloves and other miscellaneous items.

*** If the cost of budgeted personnel time is removed from the total, it is estimated that this project cost the State \$43,379 in operations and expense dollars.

COST EFFECTIVENESS

The estimated total cost of the 1995 Beal maintenance was \$230,404. This includes costs to individual landowners, the U.S.D.A. Forest Service and the Department of Forestry and Fire Protection. Based on a 3,000 acre project size, the maintenance cost \$77 per acre. Looking only at the privately held 500 acres, the maintenance cost \$163 per acre total or \$87 per acre in State operations and expense dollars.

The cost estimates for the recently suppressed Highway Fire 00FKU008628 (08/13/00-08/18/00) are \$913,000. Based on a fire size of 700 acres, this fire had a per acre suppression cost of \$1,304.

The Four-Lane Fire 94FKU007660 (07/30/94-08/02/94) cost \$1,224,376 to suppress. Using a three percent interest rate compounded annually, this cost inflates to \$1,461,969 in year 2000 dollars. Based on a fire size of 204 acres, this fire had a present day per acre suppression cost of \$7,167.

OTHER CONSIDERATIONS

Based on available fire history information, there have been 25 major fires that have burned in the vicinity of the Beal Fuel Break since 1917. Most of these fires burned before significant numbers of homes were constructed in the area. The dates these fires burned and their approximate acreage are as follows:

<u>Fire Date</u>	<u>Acreage</u>
1917	918
1917	99
1927	6,271
1927	95
1928	2,264
1928	160
1929	9,024
1930	2,308
1931	7,166
1936	107
1949	125
1950	106
1955	251
August 23, 1955	317
1964	179
1968	15
June 10, 1985	242
July 15, 1985	37
July 23, 1988	176
July 28, 1989	11,802
November 6, 1990	20
October 2, 1992	22
June 26, 1993	113
July 30, 1994	204
August 13, 2000	700

The increasing number of homes located within the wildland intermix cause fire suppression costs to increase significantly. The increased cost is a factor of firefighting resources being diverted to protect homes rather than suppressing the fire. As a result, fires grow larger in size and additional equipment is needed to suppress the wildfire.

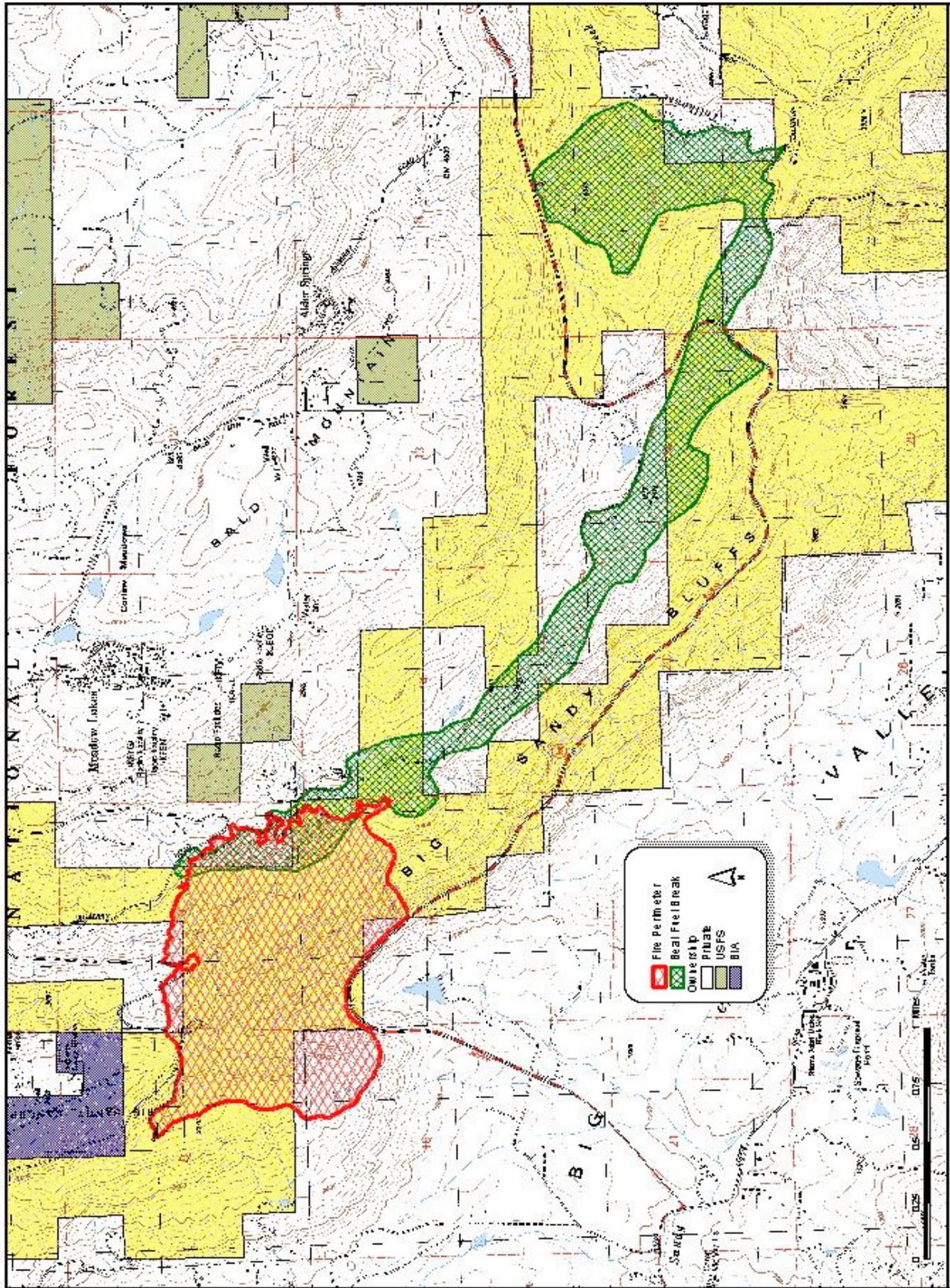
As described below, due to the increasing number of homes within the wildlands, budgetary constraints and crew availability, fuel reduction projects are becoming increasingly difficult to conduct.

- 1) It is extremely difficult and time consuming to convince formally urban residents that vegetation removal is needed to reduce the threat of catastrophic fire.

- 2) It is extremely difficult and time consuming to get neighbors to reach a consensus on the best way to conduct fuel reduction projects.
- 3) With the reduction in facilities able to take biomass material and the tightening air quality regulations, it is extremely difficult to find ways to dispose of unwanted vegetation.
- 4) Additional costs are frequently encountered that impact fuel reduction projects. An example is the proposed Prescribed Burning Fee that the San Joaquin Valley Unified Air Quality Air Pollution Control District is set to adopt in September. The fee applies a charge of \$7.92 per acre of area treated through prescribed burning. This applies to both broadcast and pile burning. If this fee had been in place in 1995, when the Beal was last maintained through piling material and burning it, the fee payable to the Air Pollution Control District would have been \$23,760.
- 5) Through the Vegetation Management Program (VMP) CDF Units are reimbursed \$5 per acre for projects like fuel break construction. This reimbursement is intended to cover unusual expenses of the Vegetation Management Program beyond normal personnel time and equipment use. Using the Beal example above, the air quality fee alone would impact the Unit's budget by \$8,760, *after* the \$5 per acre reimbursement.
- 6) Maintenance on the Beal is generally done by inmate fire crews. The closest crews to the Beal are from Fresno-Kings Miramonte Conservation Camp. Due to the Camp's location, these crews are only able to provide three to four hours of fieldwork due to travel time. This greatly increases the time it takes to complete a project. Contract crews that do fuel reduction projects are available. However, without funding outside of the normal budgetary process, i.e. fuel reduction grant money, CDF Units can not afford their cost. A California Conservation Crew would cost CDF approximately \$1,200 a day on a fuel reduction project.

CONCLUSION

On a per acre basis, fuel reduction projects are significantly more cost effective than extended attack fire suppression activities. However, fuel reduction projects are becoming increasingly difficult to conduct.



Beal Fuel Break / Highway Fire Interaction
FKU-8628 8/13/00

